

Application No.: 10/635,413

Docket No.: JCLA11963

AMENDMENTS

Please amend the application as indicated hereafter.

In the Drawings

Please amend drawings of Figs. 5 and 6 according to the annotated sheets showing changes. The attached sheets include replacement sheets and annotated sheets showing changes.

Annotated Marked-up drawing

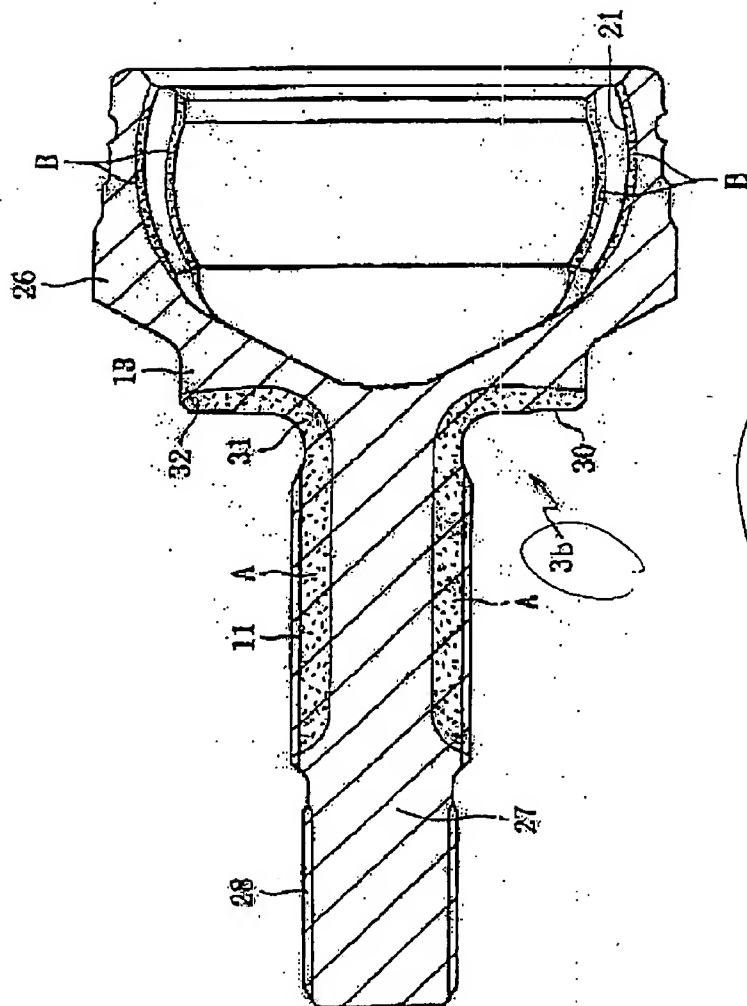


FIG. 5 (Prior Art)

FIG. 6 (Prior Art)

Replacement sheet

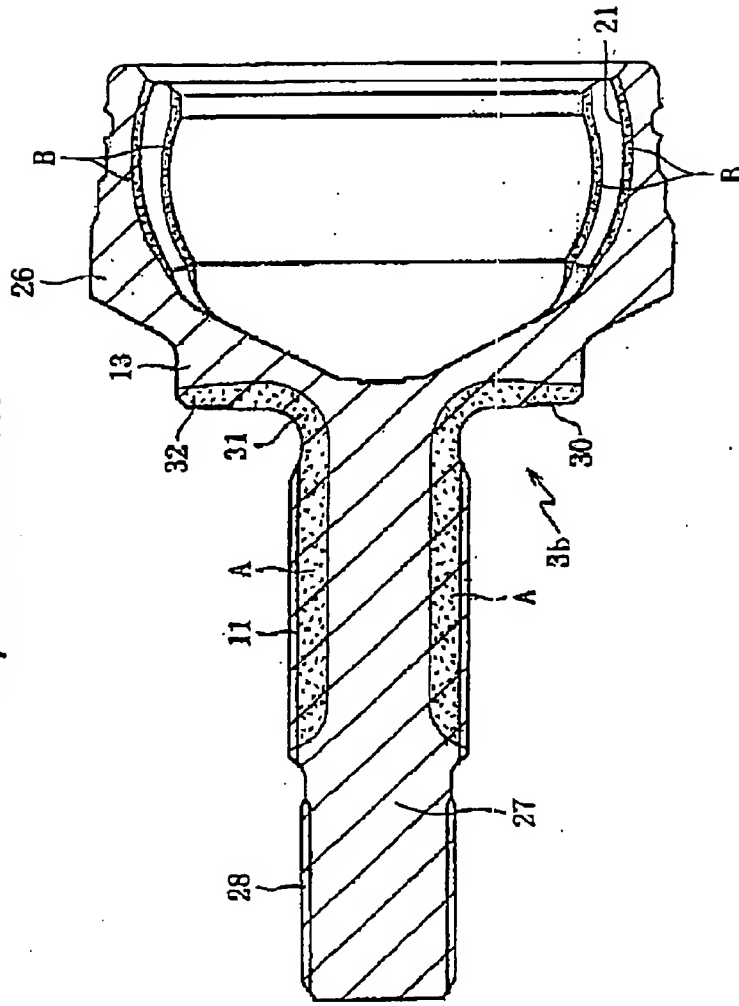


FIG. 5 (Prior Art)

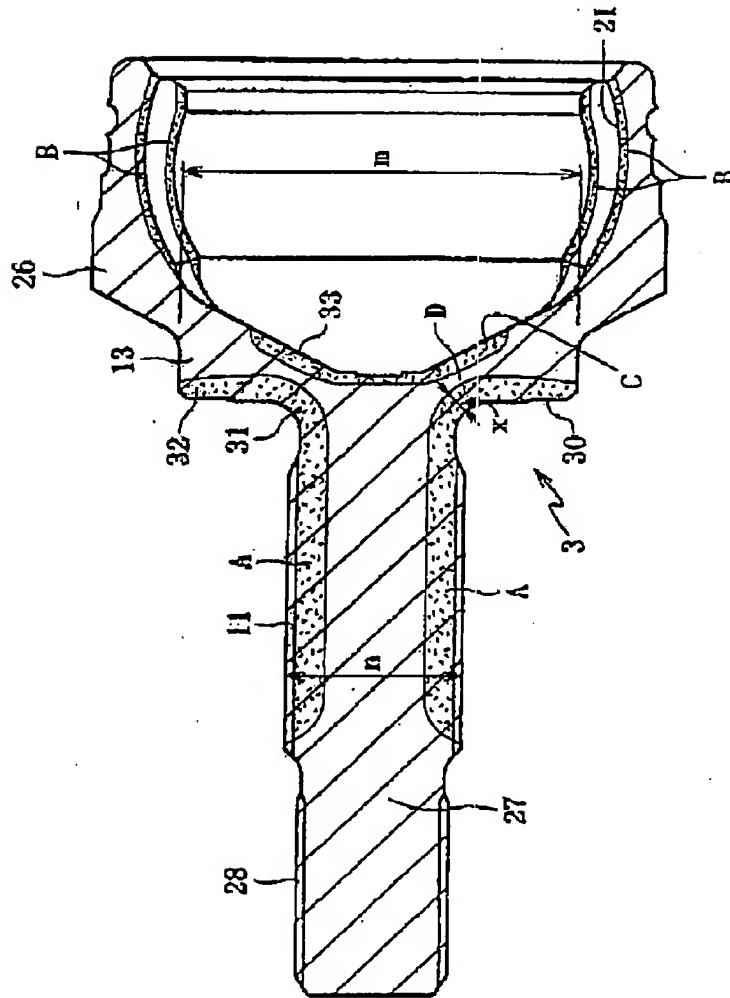


FIG. 1

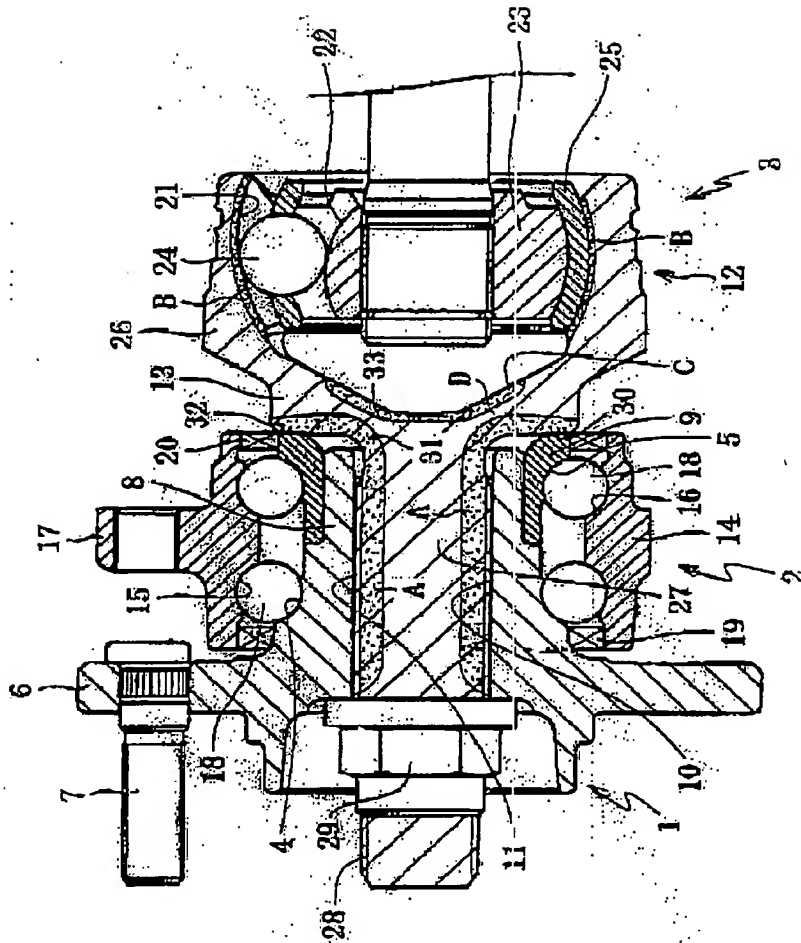


FIG. 2

Conventional product	Static torsion strength Reference	Surface hardness (Hv) / Hardness effective depth (mm)	
		Base portion Unhardened portion	Mouth bottom portion
Example a	○	572/1.8	230
Example b	⊙	570/1.8	230
Example c	⊙	670/1.8	230
Example d	○	670/1.9	230
Example e	×	668/1.8	230
		595/1.0	230

Crack: Crack occurred lower than conventional one.

Circle: Better than conventional one.

Double circle: Far better than conventional one.

FIG. 3

Heating time	Ratio of step: m/n=1.5		Ratio of step: m/n=1.8		Ratio of step: m/n=2.0	
	Hardness/depth Hv/mm	Rate of crack occurrence at shoulder portion (%)	Hardness/depth Hv/mm	Rate of crack occurrence at shoulder portion (%)	Hardness/depth Hv/mm	Rate of crack occurrence at shoulder portion (%)
Short	665/2.5	0%	665/2.4	0%	665/2.4	0%
↓ Long	671/2.9	0%	671/2.9	0%	671/2.8	0%
	662/3.0	0%	662/3.2	0%	662/3.0	0%
	660/3.5	0%	660/3.6	0%	660/3.1	61%
	660/4.2	0%	660/3.9	12%	660/3.1	88%

FIG. 4

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